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Ottaviani et al.

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[54] **HIGH SOLIDS INTERNALLY U.V. STABILIZED MELAMINE CURED URETHANE PAINT**

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[52] **U.S. Cl.** **525/454;** 525/509; 525/520; 528/49; 528/51; 528/60; 528/66; 528/73

[58] **Field of Search** 525/454, 509, 520; 528/73, 49, 51, 60, 66

[56] **References Cited**

U.S. PATENT DOCUMENTS

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[57] **ABSTRACT**

Novel, low viscosity, high solids paint compositions have been created which provide durable, high gloss surface finishes when they are applied to and cured over suitable substrates. The paints are based on urethane binder resins formed by initially reacting a hindered piperidinol ultraviolet stabilizer with a stoichiometric excess of aliphatic polyisocyanate. This reaction product is in turn reacted with a stoichiometric excess of polyether polyols. The paint compositions are cured by crosslinking the urethane binder resins at the unreacted functional hydroxyl groups of the polyol constituents by means of acid catalyzed, melamine formaldehyde crosslinking agents. Cure can generally be fully accomplished in a short time at temperatures below about 250° F. The cured paint has piperidine groups chemically incorporated within its molecular structure to effectively inhibit the degradation of the urethane linkages and the loss of gloss by ultraviolet radiation.

7 Claims, 1 Drawing Figure